Abstract of the Disclosure

A network switch port receives, stores and then forwards incoming cells. The network switch assigns each incoming cell to one of a set of flow queues, each of which is allotted a portion of space in a cell memory. The switch port periodically computes a average of the number of cells assigned to each flow queue stored in the cell memory during a preceding period, and assigns a discard weight to each incoming cell that is a function of the amount by which the average for the cell's assigned flow queue exceeds a threshold level. The switch port randomly discards incoming cells assigned to the flow queue with a probability that increases with the incoming cells' assigned weights. The switch port stores incoming cells that are not randomly discarded in the cell memory and later forewords them from the cell memory.